USSN: 10/585,416
Art Unit: 2837
Customer Number: 65565
Q95905
REPLACEMENT SHEET
1 of 10

FIG. 1

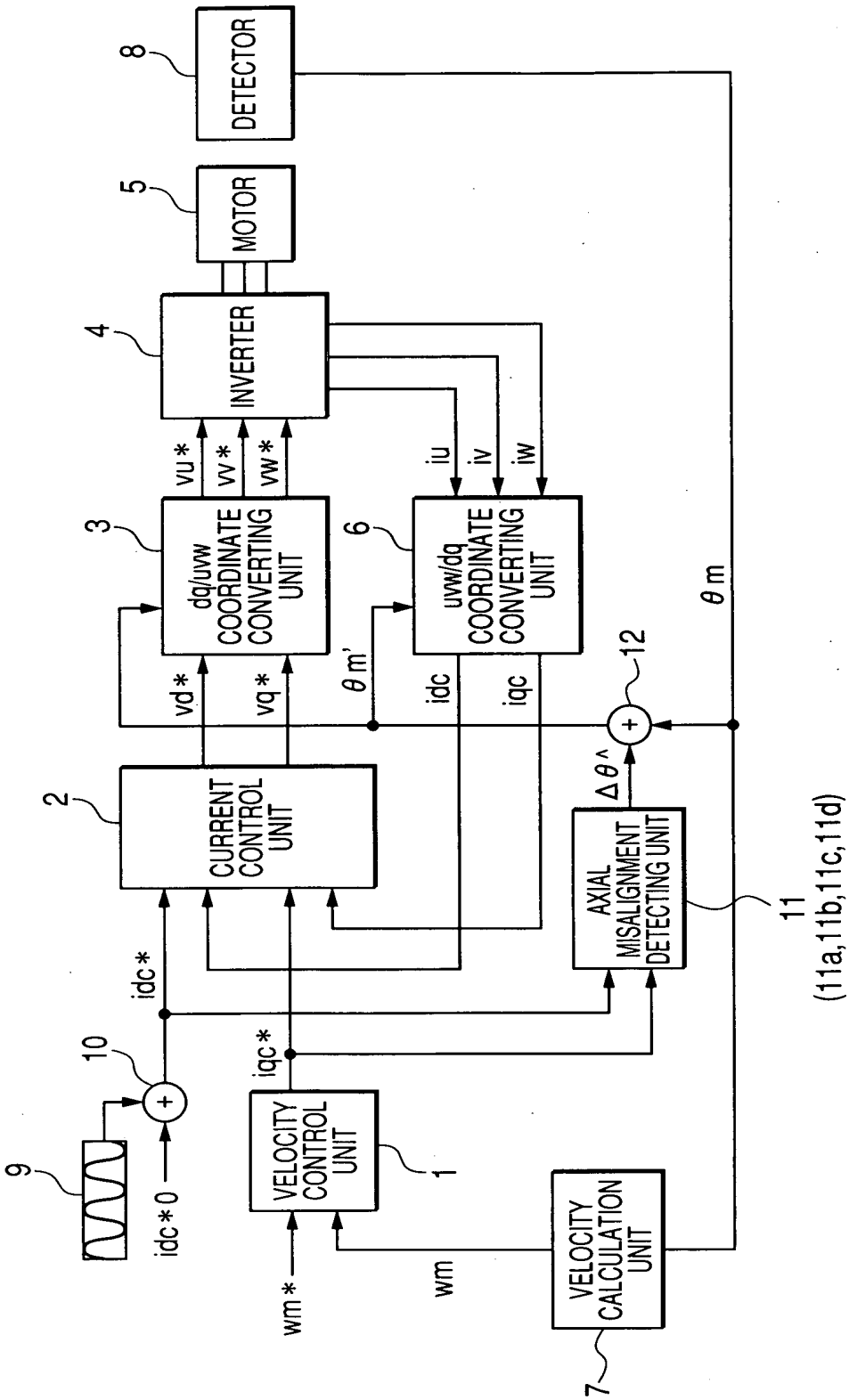


FIG. 2

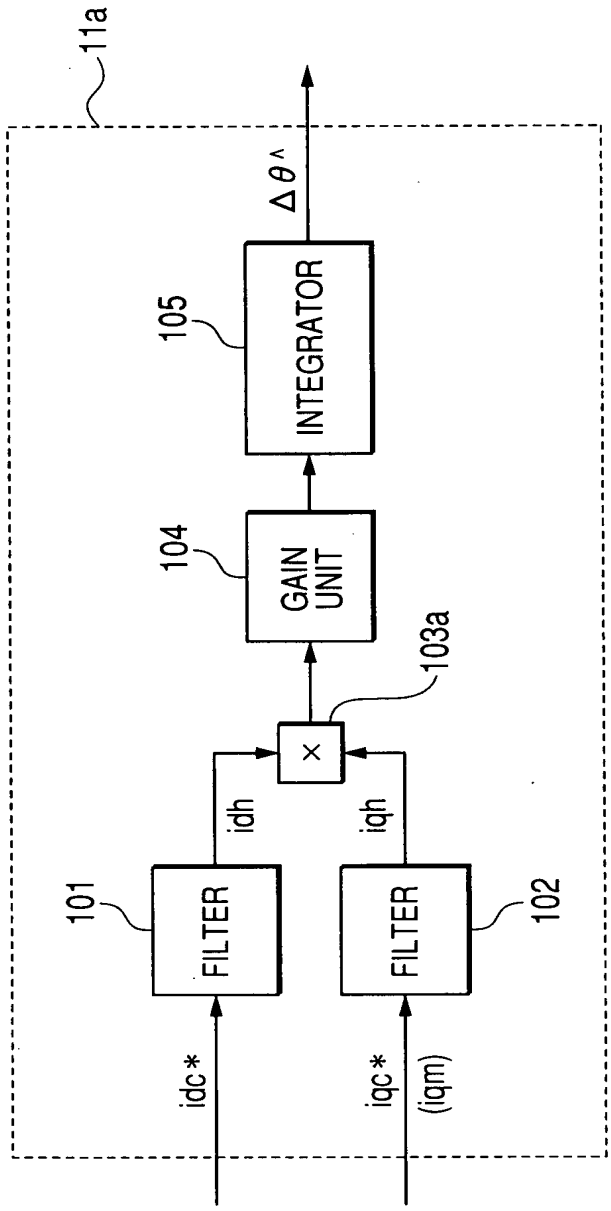

11a
Δθ^
105
INTEGRATOR
104
GAIN UNIT
103a
×
idh
iqh
101
FILTER
FILTER
102
idc*
iqc*
(iqm)

FIG. 3(a)

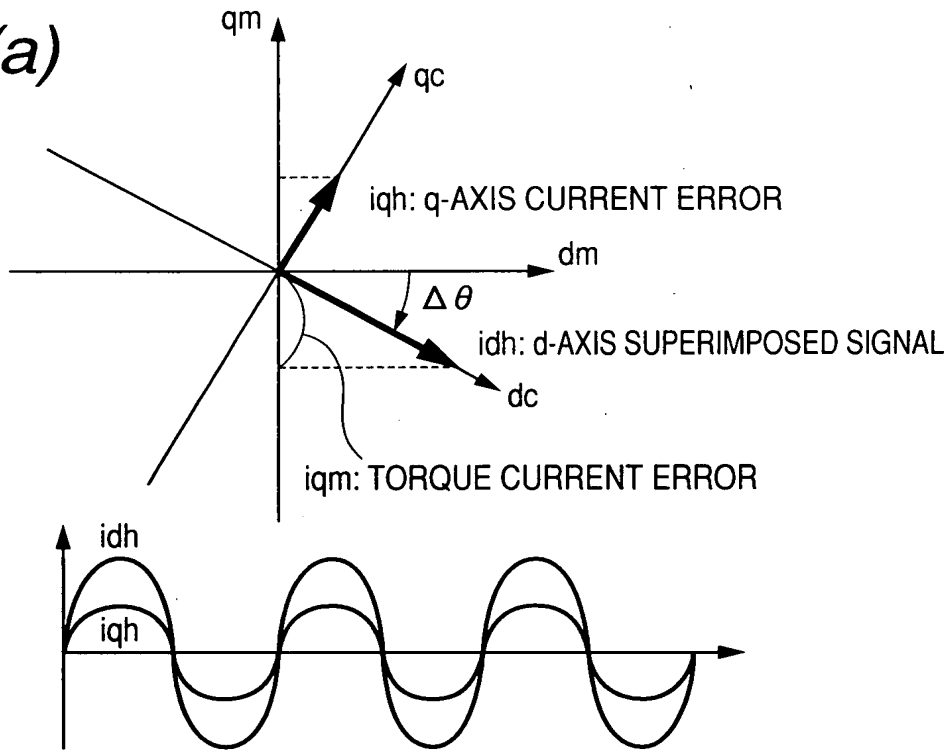

qm
qc
iqh: q-AXIS CURRENT ERROR
dm
Δθ
idh: d-AXIS SUPERIMPOSED SIGNAL
dc
iqm: TORQUE CURRENT ERROR
idh
iqh

FIG. 3(b)

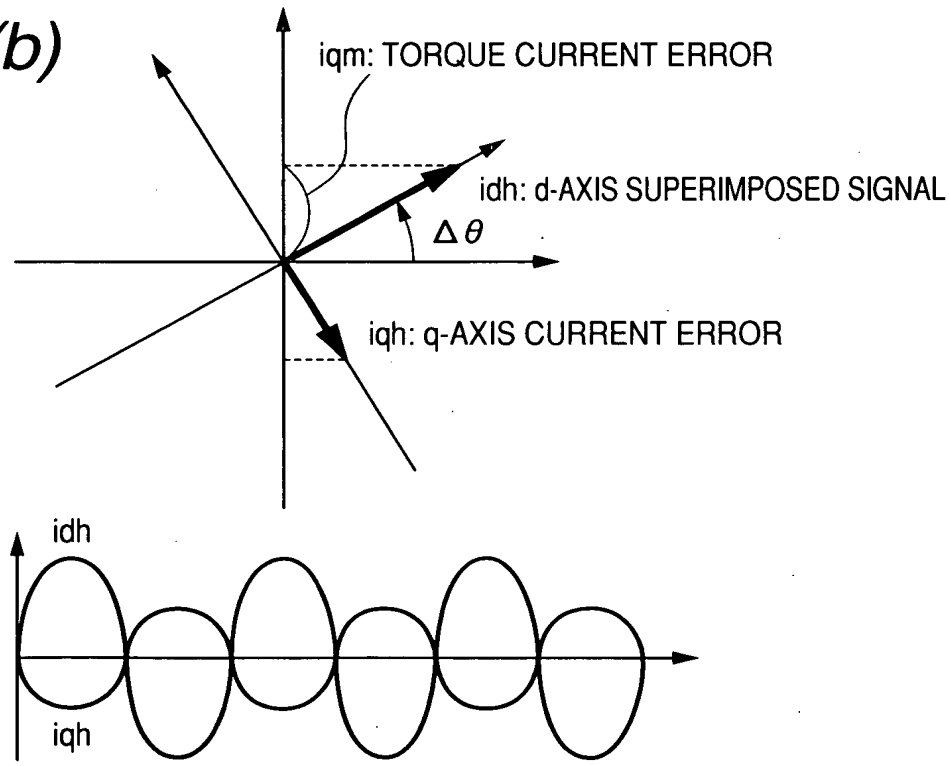

iqm: TORQUE CURRENT ERROR
idh: d-AXIS SUPERIMPOSED SIGNAL
Δθ
iqh: q-AXIS CURRENT ERROR
idh
iqh

FIG. 4

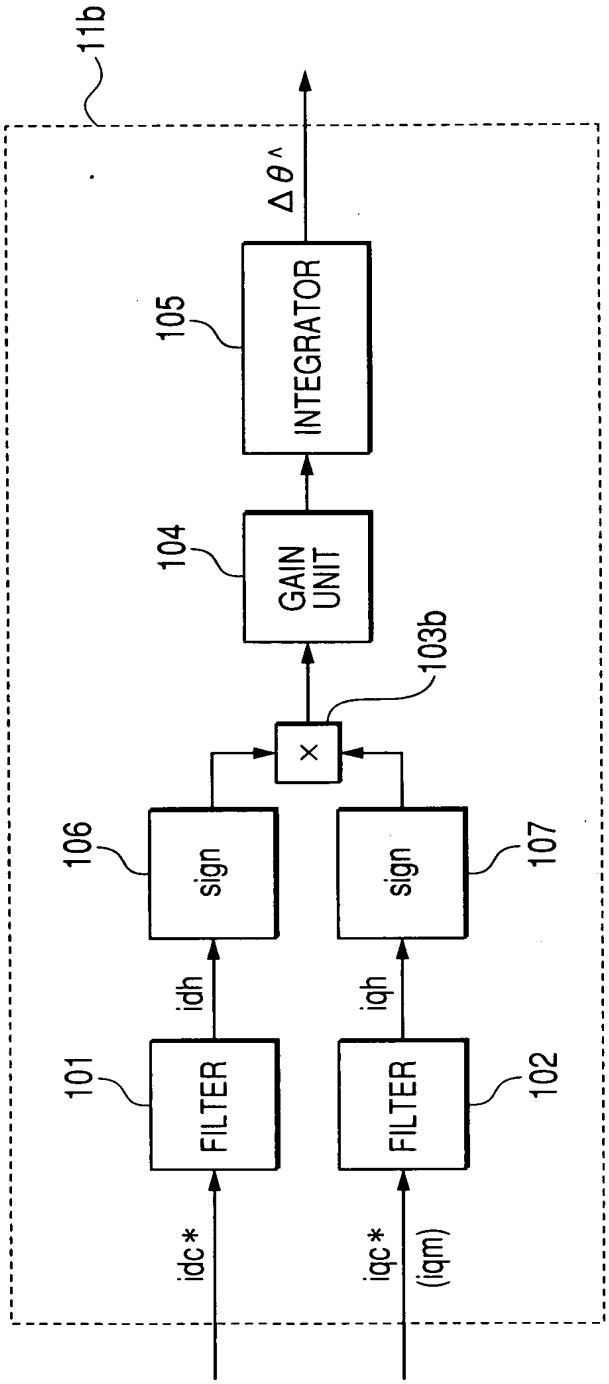

11b
Δθ^
105
INTEGRATOR
104
GAIN UNIT
103b
×
106
sign
107
sign
idh
iqh
101
FILTER
102
FILTER
idc*
iqc*
(iqm)

FIG. 5

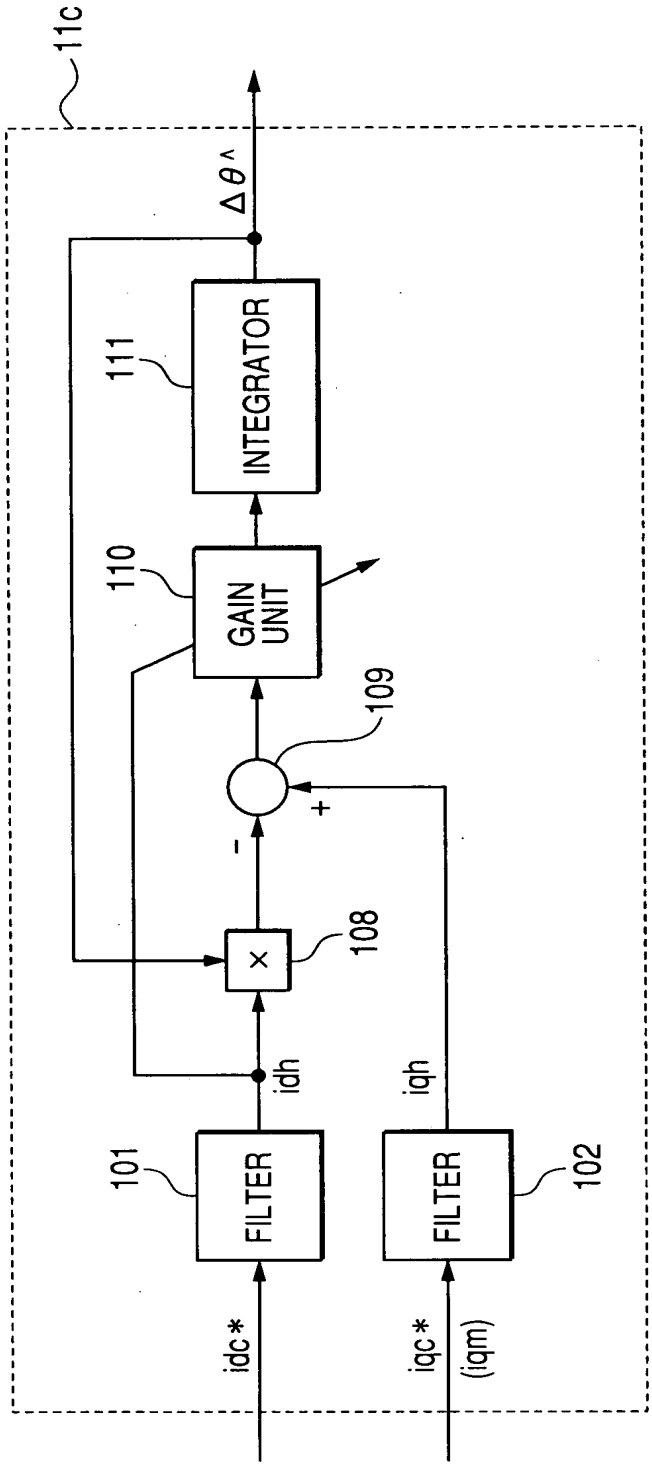

11c
Δθ^
INTEGRATOR
111
GAIN UNIT
110
109
+
-
×
108
idh
iqh
FILTER
101
FILTER
102
idc*
iqc*
(iqm)

FIG. 6

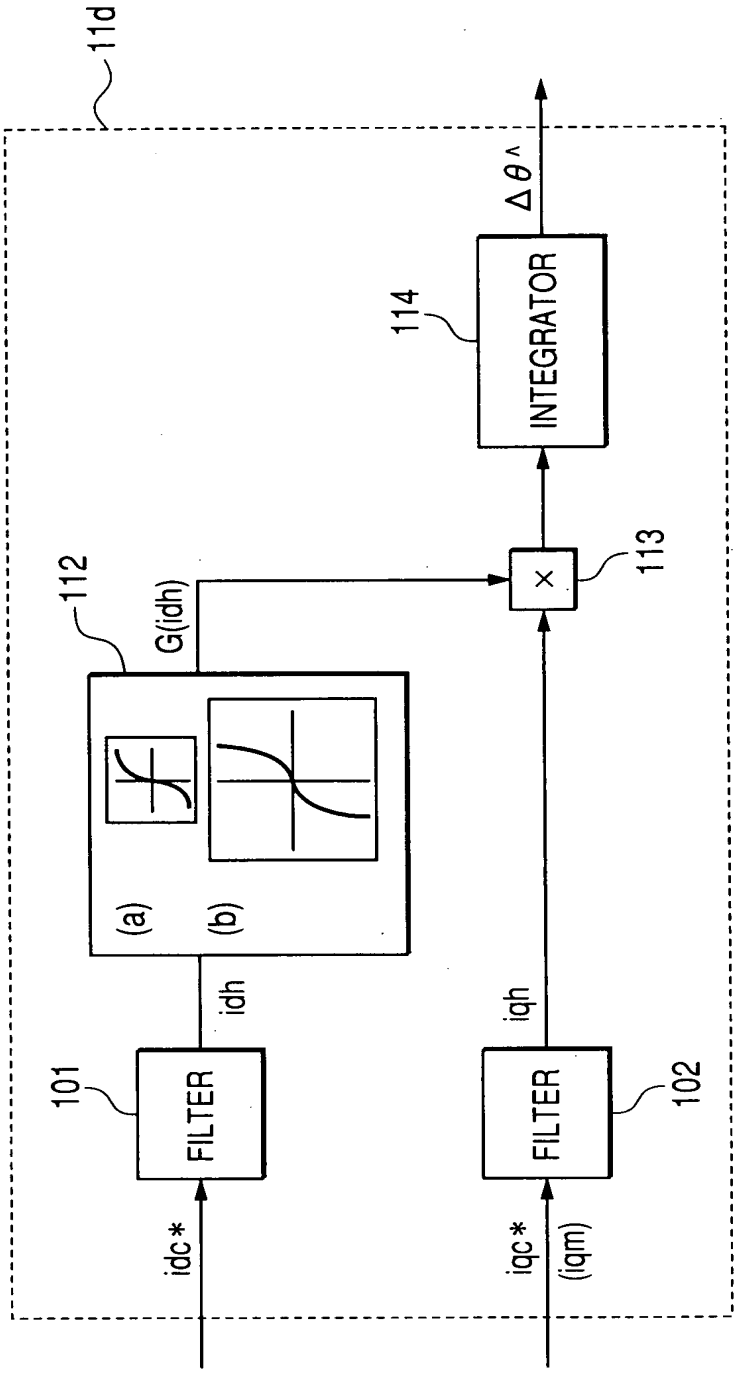

11d
Δθ^
INTEGRATOR
114
113
×
112
G(idh)
(a)
(b)
idh
iqh
101
FILTER
102
FILTER
idc*
iqc*
(iqm)

FIG. 7

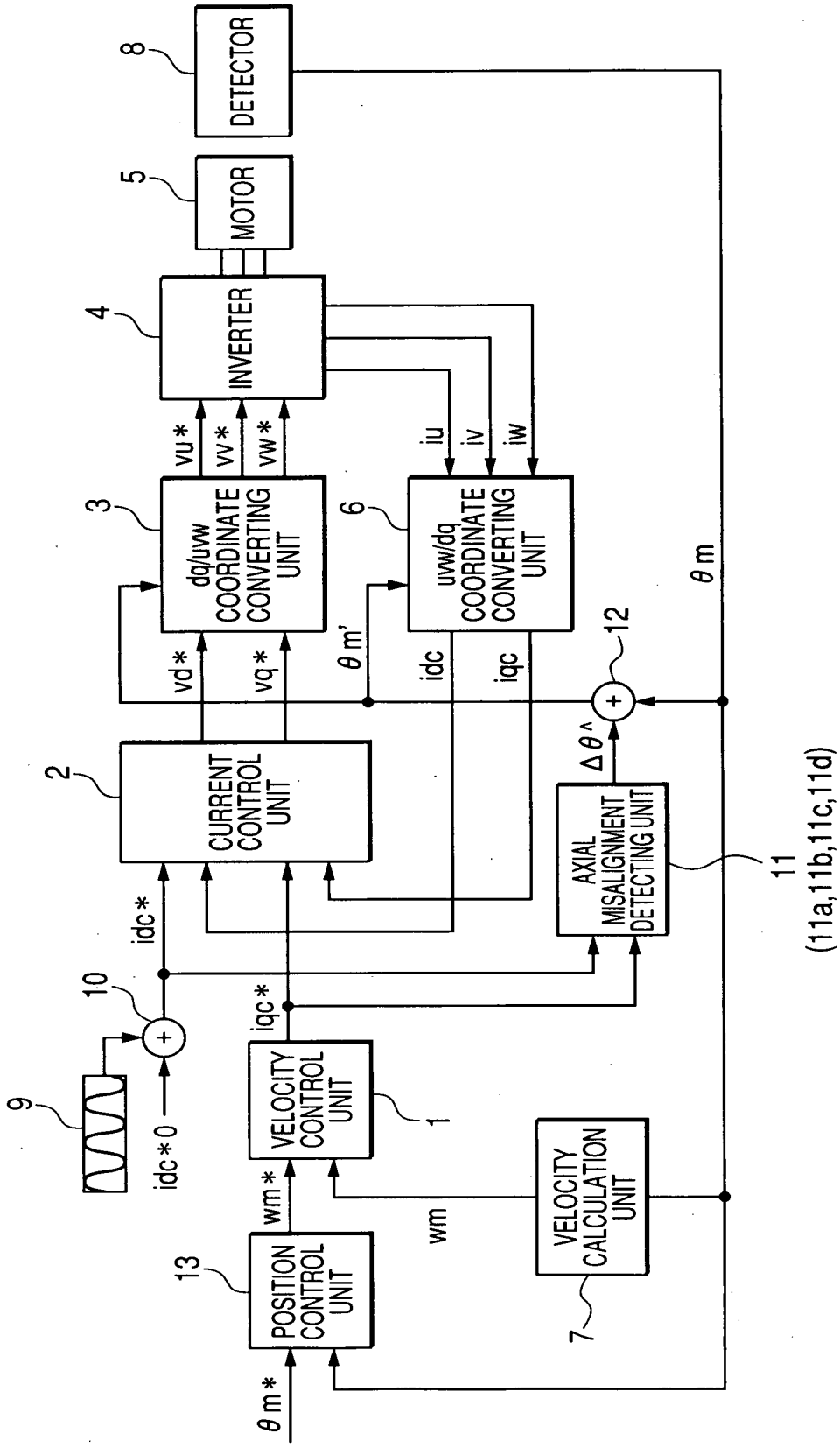

8
DETECTOR
5
MOTOR
4
INVERTER
vu*
vv*
vw*
iu
iv
iw
3
dq/uvw COORDINATE CONVERTING UNIT
6
uvw/dq COORDINATE CONVERTING UNIT
θm
vd*
vq*
θm'
idc
iqc
12
2
CURRENT CONTROL UNIT
Δθ^
AXIAL MISALIGNMENT DETECTING UNIT
11
(11a,11b,11c,11d)
idc*
10
iqc*
9
idc*0
VELOCITY CONTROL UNIT
1
wm*
wm
VELOCITY CALCULATION UNIT
7
13
POSITION CONTROL UNIT
θm*

FIG. 8

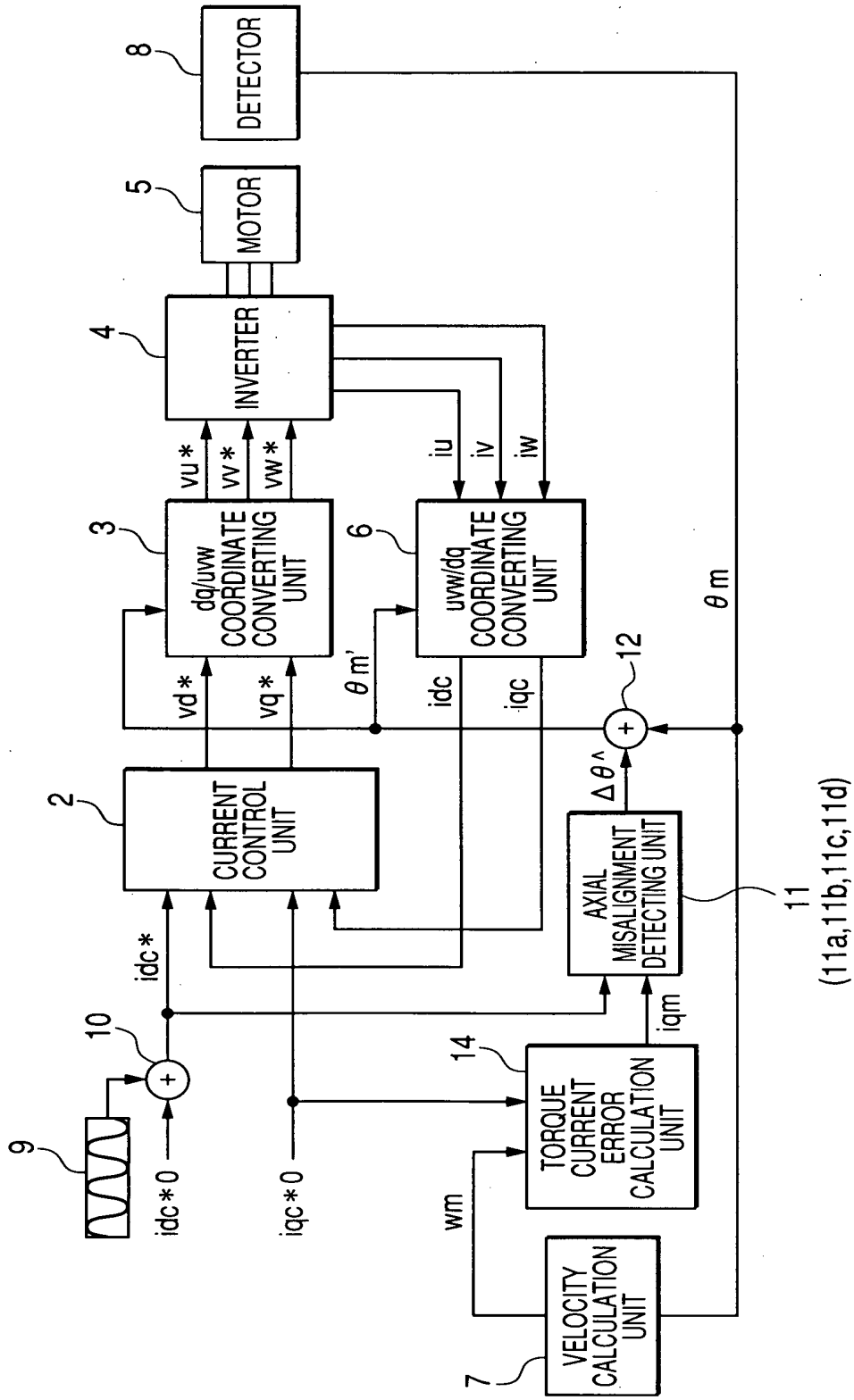

8
DETECTOR
5
MOTOR
4
INVERTER
vu*
vv*
vw*
iu
iv
iw
3
dq/uvw COORDINATE CONVERTING UNIT
6
uvw/dq COORDINATE CONVERTING UNIT
θm
vd*
vq*
θm'
idc
iqc
12
2
CURRENT CONTROL UNIT
Δθ^
AXIAL MISALIGNMENT DETECTING UNIT
11
(11a,11b,11c,11d)
idc*
10
14
TORQUE CURRENT ERROR CALCULATION UNIT
iqm
9
idc*0
iqc*0
ωm
VELOCITY CALCULATION UNIT
7

FIG. 9

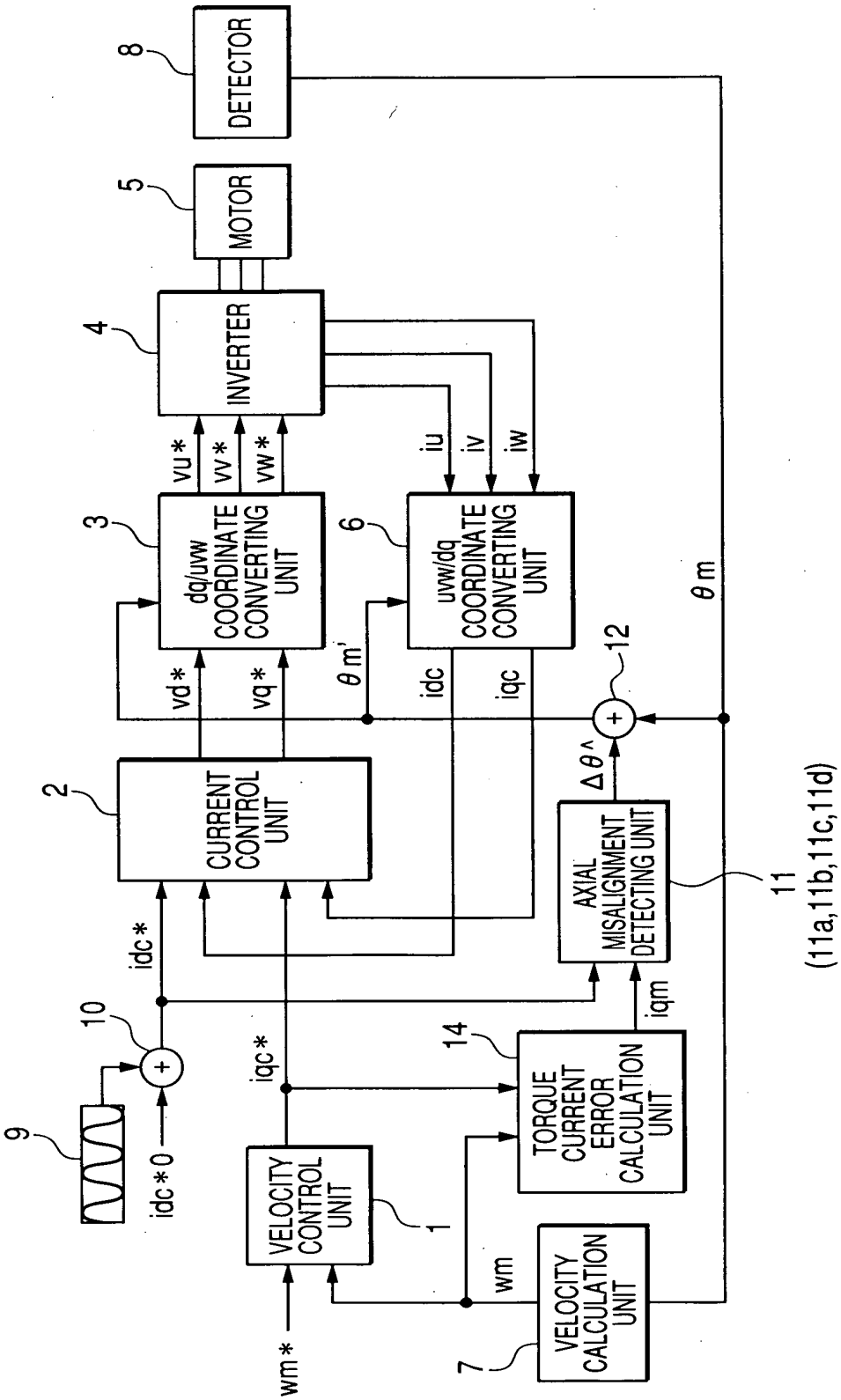
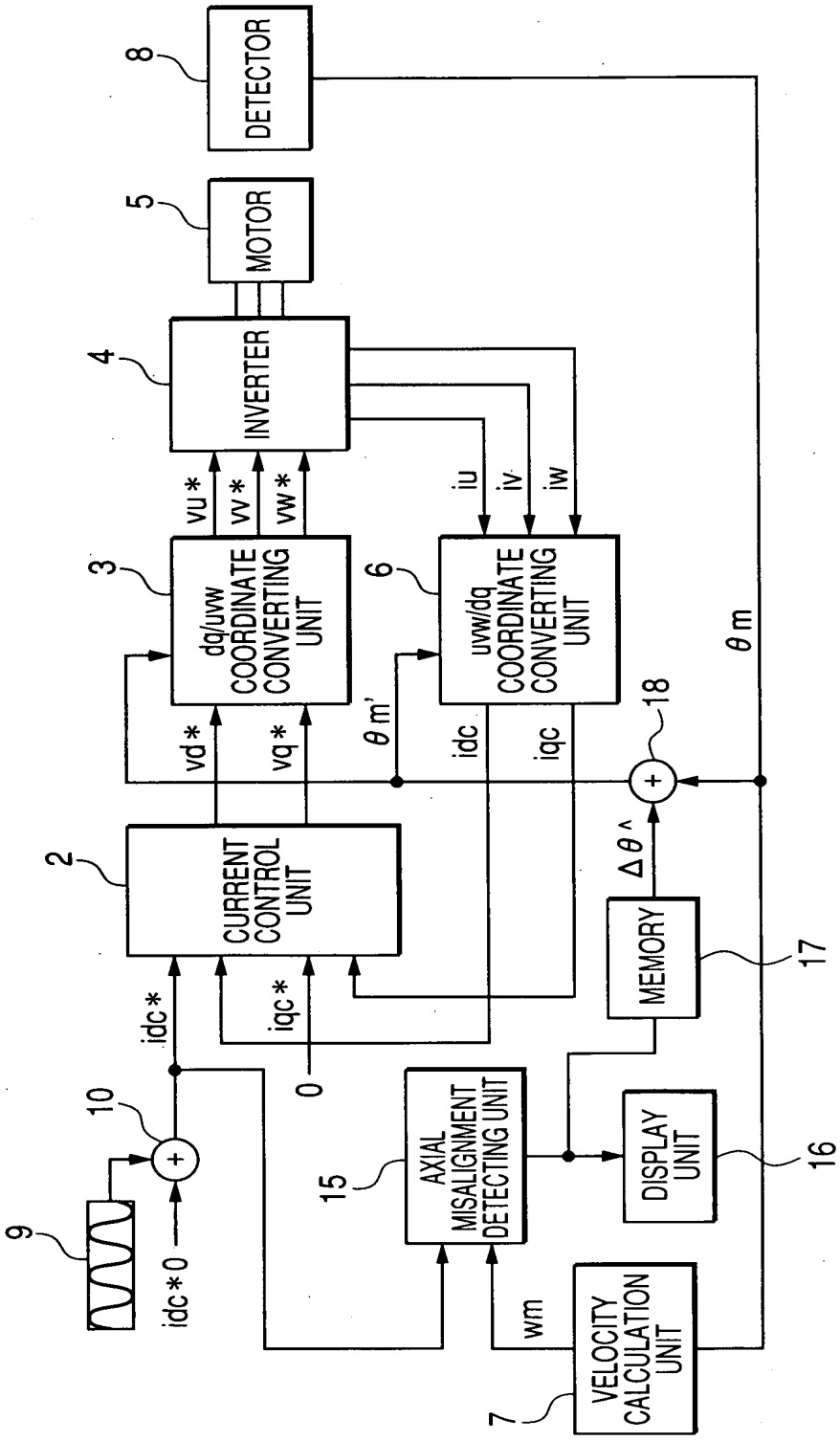

8
DETECTOR
5
MOTOR
4
INVERTER
vu*
vv*
vw*
iu
iv
iw
3
dq/uvw COORDINATE CONVERTING UNIT
6
uvw/dq COORDINATE CONVERTING UNIT
θm
vd*
vq*
θm'
idc
iqc
12
Δθ^
2
CURRENT CONTROL UNIT
AXIAL MISALIGNMENT DETECTING UNIT
11
(11a,11b,11c,11d)
idc*
10
iqc*
14
iqm
TORQUE CURRENT ERROR CALCULATION UNIT
9
idc*0
VELOCITY CONTROL UNIT
1
wm
VELOCITY CALCULATION UNIT
7
wm*

FIG. 10


8
DETECTOR
5
MOTOR
4
INVERTER
vu*
vv*
vw*
iu
iv
iw
3
dq/uvw COORDINATE CONVERTING UNIT
6
uvw/dq COORDINATE CONVERTING UNIT
θm
vd*
vq*
θm'
idc
iqc
18
2
CURRENT CONTROL UNIT
Δθ^
MEMORY
17
idc*
iqc*
0
10
9
idc*0
15
AXIAL MISALIGNMENT DETECTING UNIT
DISPLAY UNIT
16
wm
VELOCITY CALCULATION UNIT
7